Model OT-PLC601
Ethernet Media Converter

Use Notes

1. Signal transmission cable must be the copper cable. Other material cables will cause the decrease of signal transmission quality and distance.
2. Transmitting data network signal by mixing twisted pair, telephone line, coax cable or Power Line connection is available
3. This device has no waterproof design. Please use the product in dry environment.
4. Please choose matching power supply specification (12VDC /1A) to supply power for devices respectively.
5. Please do careful setting before using: There is only one Master in a line, otherwise it can not transmit network signal.
6. Long-distance cable connections must be standard connection method, such as welding or use connectors.
7. If devices fail, do not disassemble or repair it by yourself. Please contact us timely.

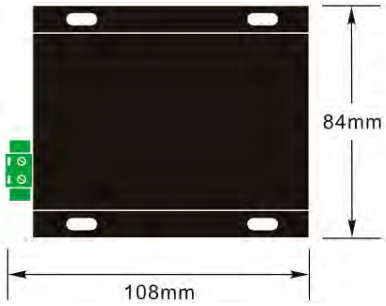
Product Features

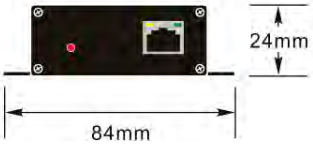
- ◆ Transmit 10/100 BaseT Full Duplex Ethernet up to 1000m over any 2-wire copper cable
- ◆ One Ourten master at the network-end can support multiple slaves and connected devices
- ◆ Different terminals to choose such as RJ45, RJ11, BNC, Two Pins terminals etc.
- ◆ Low power consumption, high performance error correction coding technology
- ◆ Built-in transient protection; Industrial temperature range
- ◆ Easy configuration, plug and play

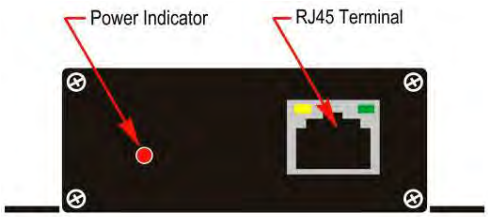
The OURTEN model **OT-PLC601** Ethernet over 2-wire Transceiver is a compact media converter that allows 10/100 BaseT Ethernet to be transmitted using any 2-wire copper cables. These devices are often used in legacy installations where existing wire is re-used as part of an upgrade to IP devices. You can use one master at the network-end can support multiple slaves and connected devices.

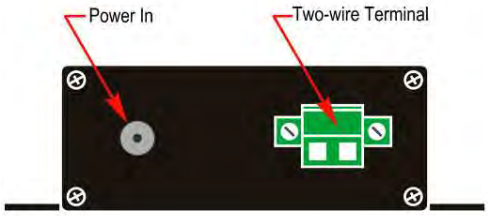
These transceivers are extremely simple to use and easy configuration. Status LEDs indicate power and link connectivity/activity for RJ45 and 2-wire ports. This product can be widely used for network extension system, network security, network information publishing system, network renovation and expansion systems, railway, urban traffic, mining and telecommunication, etc.

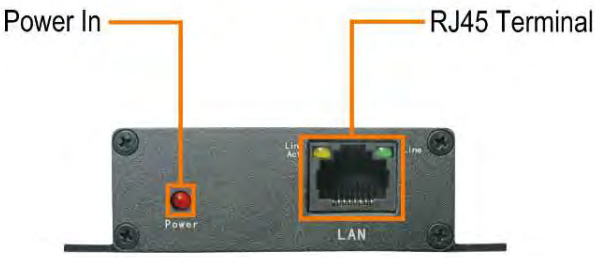
Terminal Instructions

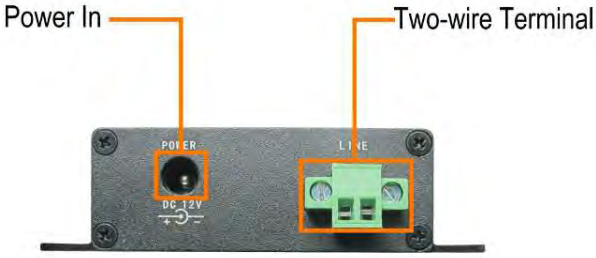












Configuration Instructions

OURTEN model OT-PLC601 transmits high bandwidth Ethernet signals over 2-wire cables. This group typically consists of one OT-PLC601 (Master) located at the control room (usually connected to an Ethernet switch or router), and up to 4---6pcs remote OT-PLC601 (Slave),which are usually connected to IP cameras or other remote IP devices.

Step One: Gather Devices

- OT-PLC601
- 12VDC/1A power supply
- Two-wire cables
- IP camera or other network devices

Step Two: Connection

1. Connect the LAN Port of Master side to the network equipment RJ45 output. Two-wire terminal is connected to two-wire
2. Connect the low-voltage power supply (12VDC) to the power port of Slave side, Power indicator is on, Link indicator is on.
3. Connect the other end of the two-wire cable to the Master two-wire terminal, the Ethernet Out is connected to the network equipment (such as PC) through network patch cord.
4. Connect the low-voltage power supply (12VDC) to the power port of Master side, Power indicator is on, Link indicator is on.
5. When network transmission is smooth, the devices automatically try to connect. The Line indicator quickly blinks. Then it shows that network signal transmission is normal.

Installation Instructions

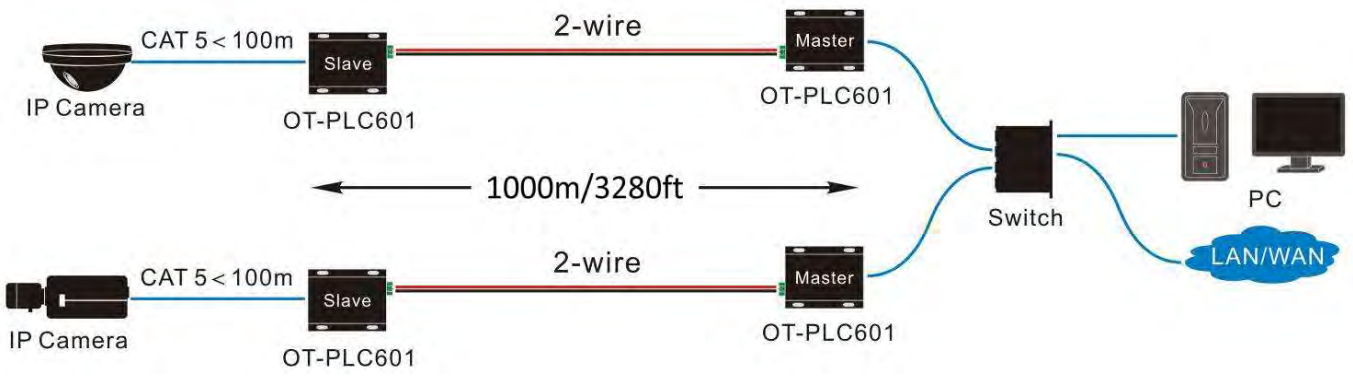


Figure 1 - Typical Installation

Most installations that use the OT-PLC601 involve the replacement of old analog equipment with new IP devices, while reusing the installed wire. In generally, there are two connections types. One is typical connection (**Figure 1 above**). And the other is Bus-architecture connection (**Figure 2 Below**). You can choose the connection type in line with actual environment.

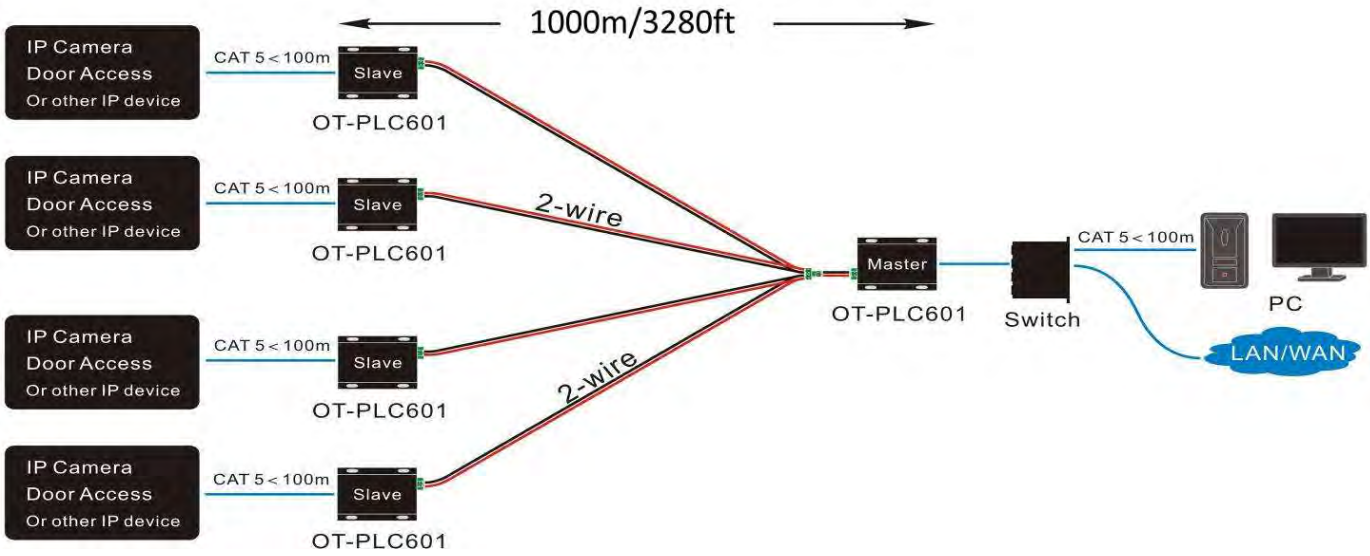


Figure 2- Bus-architecture Connection

Power + Ethernet Transmission via Power line

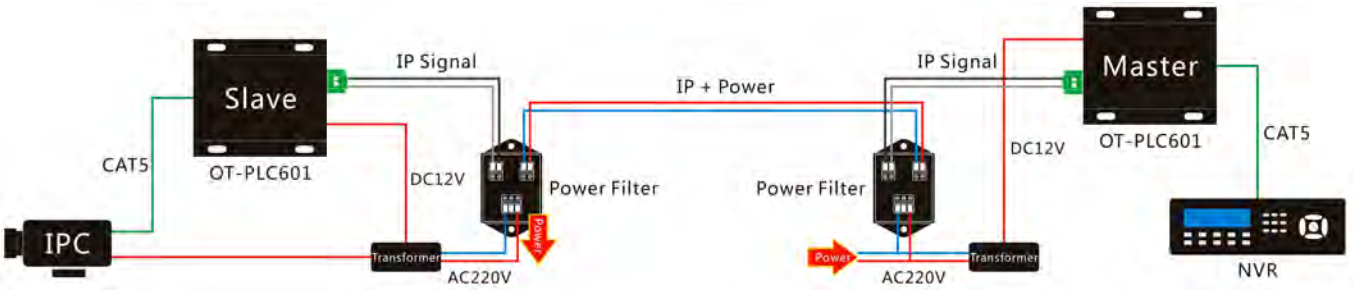


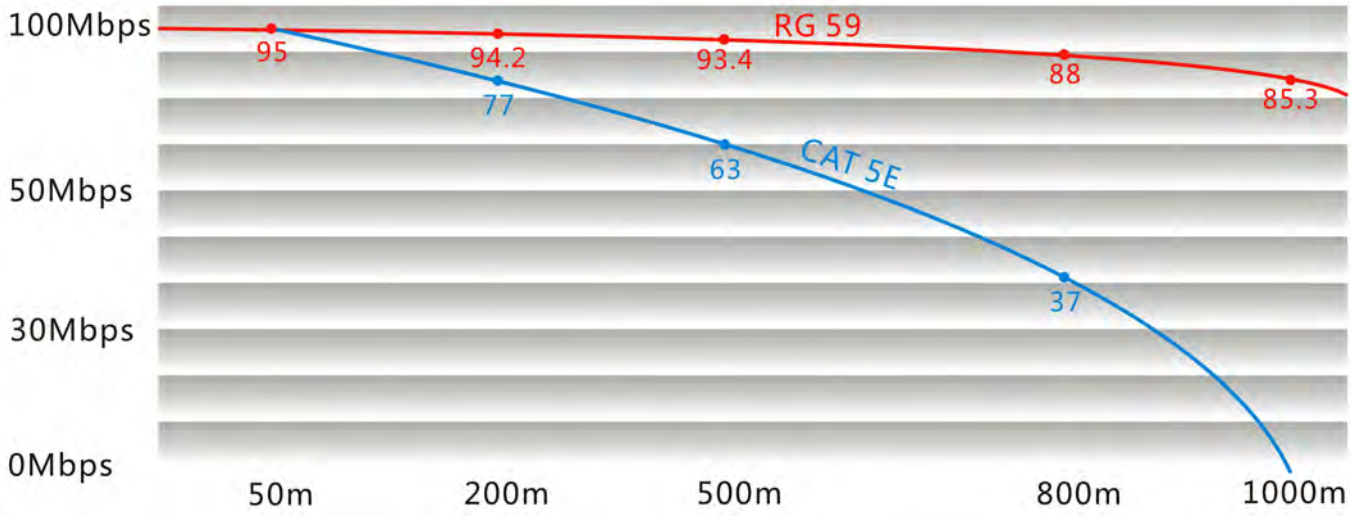
Figure 3- Additional Application

Technical Specifications

Category		Description
Power	Available Voltage Range	12VDC
	Power Consumption	＜1.5W
Transmission / Rate	Standard Compliance	IEEE1901, IEEE802.3
	Up down agreement	CSMA/CA
	Physical speed	500Mbps
	Encryption way	128-bit AES Encryption
Reliability	MTBF	＞30000 hours
Product Physical Characteristic	Dimensions (L × W × H)	108mm×84mm×24mm (including the terminal length)
	Material	Aluminum
	Net weight	300g/PC
Operating Environment	Working Temperature	-40℃ ～ 85℃
	Storage Temperature	-55℃ ～ 125℃
	Working Humidity	20％ ～ 85%
	Storage Humidity	10％ ～ 90％

Cables Type and Network Data Rate

The graph below shows OT-PLC601 transmission distance and network data rate. The data differs from the cables types. When you use this device, please choose the suitable cables in line with your demands.



The above data for TCP throughput, is the measured data in the actual environment. The maximum physical layer data is 500Mbps. For coaxial cable transmission, performance is more stable, but it also affected by the cable and terminal matching methods. The above tests are all finished in the field test.

Simple Fault Cases

Indicator	Feature	Phenomenon
POWER	ON	Power supply works normally
	OFF	No power supply, or the power supply does not work normally
LINE	ON	Line is activated
	OFF	Line is not activated
	FLASH	Line is trying to activation